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| 10/701,527 | 11/06/2003 | Daniel Baumberger | 42339-192058 | 7357 |
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| VENABLE LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998 | | | | |
| EXAMINER | | | | |
| SEYE, ABDOU K | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/701,527

Applicant(s)

BAUMBERGER, DANIEL

Examiner

Abdou Karim Seye

Art Unit

2194

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10-15 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1, 3-8, 10-15 and 17-20 are pending in this application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103 (a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-8, 10-15 and 17-20 are rejected under 35 U.S.C. 103 (a) as unpatentable over Vasudeva et al. (US 20040267691) in view of Bugnion et al. (US 6075938) .

4. As to claim 8, Vasudeva teaches the invention substantially as claimed a computer system comprising:

at least one hardware processor (236, FIG. 2A); and

a computer readable memory (268, FIG. 2A) comprising program instructions, executable by the at least one processor, for:

first and second virtual machines (204 and 227, FIG. 2C); a first virtual machine control structure (216, FIG. 2C) associated with the first virtual machine, the first virtual machine control structure having a first virtual machine queue (209, FIG. 2C) adapted to enqueue and dequeue a message;

a second virtual machine control structure (232, FIG. 2C) associated with the second virtual machine, the second virtual machine control structure (232, FIG. 2C) having a second virtual machine queue (224, FIG. 2C) adapted to enqueue and dequeue a message.

5. Vasudeva does not explicitly teach a virtual machine monitor coupled to the first and second virtual machines and to the first and second virtual machine control structures, the virtual machine monitor adapted to supervise communication between the first and second virtual machines and communicate a message stored in a page from the first virtual machine to the second virtual machine by updating a page table by a processor by remapping a page from being associated with the first virtual machine in to being associated with the second virtual machine.

6. Bugnion teaches a virtual machine monitor coupled to the first and second virtual machines (abstract; FIG. 3) , and communicate a message from the first virtual

machine to the second virtual machine , updating a page table by a processor , remapping a page (FIG. 4; col. 16, lines 1-12) .

7. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Vasudeva's invention with Bugnion's to include a virtual machine monitor adapted to communicate a message from the first virtual machine to the second virtual machine, updating a page table and remapping a page. One would have been motivated to include a message communication between virtual machine in order to reduce duplication of data in machine memory, and therefore to improve the efficiency of Vasudeva's system.

8. As to claims 8 and 15, they are rejected for the same reasons as claim 8 above.

9. As to claims 3 and 17, Vasudeva teaches, wherein updating includes: placing at least one of data and an address associated with the page into a first virtual machine control structure (216, FIG. 2C, paragraph 42, where the control module (216) is the first virtual control structure) associated with the first virtual machine; exiting the first virtual machine; placing the at least one of data and address into the second virtual machine queue ; and dequeuing the second virtual machine queue (paragraph 41 and 46, "transferring the data from the queue", where this claimed element of Vasudeva's reference meet the claimed limitation of the claim).

10. As to claims 4 and 18, Vasudeva teaches , wherein dequeuing includes: reading the at least one of data and address into a second virtual machine control structure associated with the second virtual machine; and storing the at least one of data and address into the address space associated with the second virtual machine (paragraph 39; "reads and writes data" where this claimed element of Vasudeva's reference meet the claimed limitation of the claim).

11. As to claims 5 and 19, Vasudeva teaches, wherein the page contains a message and the method further comprises: processing the message within the second virtual machine (paragraph 39).

12. As to claim 6, Vasudeva teaches, wherein exiting occurs immediately after placing the at least one of data and an address associated with the page into the first virtual machine control structure (paragraph 46).

13. As to claims 7 and 20, Vasudeva teaches, further comprising: conveying identification information associated with the first and second virtual machines between the first and second virtual machines via the first and second virtual machine queues

(paragraph 39; where the claimed elements "process" and "identification" of Vasudeva's reference meet the claimed limitation of the claim).

14. As to claims 10-12, they are rejected for the same reasons as 3 above .
15. As to claim 13, it is rejected for the same reasons as claim 5 above.
16. As to claim 14, it is rejected for the same reasons as claim 7 above.

Response to Arguments

17. Applicant's arguments with respect to claims 1, 3-8, 10-15 and 17-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until

after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdou Karim Seye whose telephone number is 571-270-1062. The examiner can normally be reached on Monday - Friday 8:30 - 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sough can be reached on 5712726799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hyung S. Sough/
Supervisory Patent Examiner, Art Unit 2194
06/05/09

/Abdou Karim Seye/
Examiner, Art Unit 2194